of the diamond. The corpuscles are said to amount to 1 per cent. of the meteoric stone.

Carbon, in its amorphous graphitic form, has been long known as a constituent of meteoric irons and stones; lately, small but well-defined crystals of graphitic carbon having forms often presented by the diamond, were described in our columns as having been found in a meteoric iron from Western Australia. If this supplementary discovery be confirmed, we may at last be placed on the track of the artificial production of the precious stone.

## *NOTES.*

ON Tuesday afternoon an important meeting was held in the Town Hall, Manchester, in support of the National Association for the Promotion of Technical Education. A powerful and most interesting address was delivered by Prof. Huxley. Afterwards, in accordance with a resolution moved by Sir H. E. Roscoe, and seconded by Sir W. H. Houldsworth, the meeting appointed an influential Committee to consider the proposals communicated by the National Association for the Promotion of Technical Education, and to take action thereon. Now that the vital importance of the subject is beginning to be understood in the district, there can be little doubt that Manchester will soon be supplied with a thoroughly sound and adequate system of technical instruction. The residuary legatees under the will of the late Sir Joseph Whitworth have just presented to the town a plot of land, called Potter's Park, which they have bought for £47,000. On a part of this land it is proposed that the following institutions shall be erected: (1) an appropriate Institute of Art, with galleries for paintings, for sculpture and moulded form, and for architectural illustration; (2) a comprehensive Museum of Commercial Materials and Products; (3) a Technical School on a complete scientific and practical scale. Much money will have to be provided before this scheme can be fully carried out, but in so great a centre of manufacturing and commercial energy the necessary funds should be raised without serious difficulty. The managers of the late Manchester Exhibition, like the Whitworth legatees, are vigorously supporting the movement, and their example will certainly be extensively followed. The progress made at Manchester is most satisfactory, and there are also many signs of an advance in the right direction at Liverpool and Newcastle.

THE latest news from Mr. John Whitehead is that he has returned from Palawan with a rich collection, especially in birds, of which he believes that he has obtained over eighty species not previously recorded from the island, and a large number of migrants. Palawan is an interesting place for a naturalist, as it lies so near the Philippine Archipelago, and yet contains a very strong Bornean element. Mr. Whitehead proposes shortly to make another ascent of Kina Balu Mountain, where last spring he obtained nineteen new species of birds, described by Mr. Bowdler Sharpe in the *Ibis* for October.

LETTERS have recently been received from Mr. H. O. Forbes, who is now at Granville in British New Guinea. He has not recovered from the overwhelming disaster at Batavia, when the whole of the *matériel* for his explorations was lost by the upsetting of a boat in the surf, but his spirits and those of his brave wife appear indomitable, and he hopes yet to proceed into the interior of New Guinea. He remarks that the Horse-shoe Range of the Astrolabe Mountains is unkown to residents in the island. This is the place whence Mr. Hunstein sent the wonderful birds of Paradise described by Dr. Finsch and Dr. Meyer, but Mr. Forbes says that he cannot find out the position of the range to which Hunstein attached the name. Mr. Forbes states that he has penetrated further inland than any other explorer, but that "no European foot has yet trod any portion of the real Owen Stanley Range." Surely some assistance can be rendered to this good naturalist, who has expended £2000 of his own money in the cause of science, to enable him to prosecute further researches. It only requires a glance at Mr. Forbes's work on the Malay Archipelago to show that he is a worthy follower in the footsteps of Wallace.

AT a dinner given by the Library Committee of the Corporation of London on Monday, Prof. Stokes responded for "Science." He said men of science knew how fascinating the pursuit of science was, even apart from its applications. It differed from art, however, in this respect, that when the scientific man had arrived at his result it was in very many cases of such a nature that only comparatively few men, who themselves had been trained more or less in science, could enter into and derive pleasure from it.

THE discussion on Sir Frederick Abel's paper on "Accidents in Mines," at the Institute of Civil Engineers, came to a conclusion on Tuesday evening, the debate having extended over four meetings, a number of well-known colliery owners and managers coming up from the country to take part in it. Safety-lamps, gas, coal-dust, winding-gear, and other topics were exhaustively discussed, and it was evident that amongst practical men a considerable difference of opinion exists on many of the questions raised. Sir Frederick having directed attention to the communication in NATURE, vol. xxxvi. pp. 437 and 438, Mr. Harries gave further particulars bearing upon the meteorology of colliery explosions. He showed how the popular belief that disasters are always accompanied by a low barometer is fostered by English and foreign newspaper reporters and writers habitually making statements on the subject which cannot be justified by the facts. Very few of the explosions of 1886 and 1887 have been coincident with a low barometer, and out of the list of disasters in the eleven years 1875–85 given by Sir Frederick Abel only 18·75 per cent. of the accidents, and 17·4 per cent. of the deaths, occurred when the mercury was at 29½ inches or below. One half of this small percentage of explosions took place with a low but rapidly rising barometer, and at a time when gas is shown by careful observations to have commenced issuing from the strata. The importance of studying the influence of anticyclones in connection with mining was still further emphasized, as coal-dust is more inflammable and more difficult to moisten when the air is cold and dry than in the time of cyclones, when the air is warm and damp. In the new rooms recently added to the Institute, an interesting series of appliances for use in mines was on exhibition, a number of safety-lamps of different patterns, oil and electric, the Fleuss apparatus, Loeb's respirator, safety winding-gear, anemometers, and a collection of photographs of miners actually at work, hewing, timbering, &c., from Mr. Sopwith, Cannock Chase.

MR. GOSCHEN will deliver his inaugural address as President of the Royal Statistical Society on Tuesday, December 6, when the first ordinary meeting of the present session will be held. The Statistical Society usually holds its meetings at the Royal School of Mines in Jermyn Street; but on the present occasion, as the Council have reason to expect an extra large attendance of the Fellows and their friends, it has been arranged that the meeting shall take place at Willis's Rooms, King Street, St. James's, at the usual hour, 7.45 p.m.

WE regret to have to record the sudden death of Dr. Max Schuster, Privat-docent and Assistant in the University of Vienna. His laborious researches on the optical characters of the Felspars are known to every petrologist; and his treatise on the features of Danburite, in its almost painful minuteness of observation and calculation, is one of the seven wonders of modern crystallography. His kindliness of manner, and his enthusiasm, won him the affection and esteem of all who had the good fortune to know him: by his death, at the early age of thirty, Mineralogy is deprived of the most promising of its investigators.

DR. GUSTAV THEODOR FACHNER, the well-known physicist, died at Leipzig on November 18. He was born near Moscow, on April 19, 1801.

NATURALISTS have learned with much satisfaction that Mr. William Davison has been appointed to the Curatorship of the Singapore Museum. Mr. Davison's appointment has been objected to on the score that he is a "mere collector," but, even if this were the case, it would scarcely be denied that he is one of the best collectors ever known. Certainly he is without a rival in the present day, and only Wallace or Bates or Clarence Buckley could be named along with him. Such objectors, however, are singularly ignorant of Mr. Davison's career. For thirteen years he was Curator to Mr. Allan Hume, whose private museum was one of the best managed in the world, and he has conducted some of the most important scientific expeditions of modern times. At Singapore he will have the opportunity of completing his explorations in Malacca, which he commenced some ten years ago, when he traversed the whole of the western half of the peninsula, but was not able to penetrate to the mountainous regions of the eastern half. A rich field of discovery awaits him, if we may judge from the collections sent by Mr. Wray to the British Museum from the Larut Range behind Perak. Every naturalist may depend upon the hearty co-operation of Mr. Davison in any branch of science, and we shall expect to see that, in the course of a few years, Singapore possesses one of the most famous natural history collections in the East.

ON Saturday last Mr. Francis Galton gave at the South Kensington Museum the first of three lectures on heredity and nurture. Towards the close of the lecture Mr. Galton spoke of the advantages which might be derived from the establishment of a permanent anthropometric laboratory. An anthropometric laboratory is a place where a person may have any of his various faculties measured in the best possible way, at a small cost, and where duplicates of his measurements may be preserved, as private documents for his own future use and reference. Such an institution would contain apparatus both of the simpler kind used for weighings and measurings, and for determinations of chest capacity, muscular strength, and swiftness, and that of a more delicate description, used in what is technically called psycho-physical research, for determining the efficiency of each of the various senses and certain mental constants. Instruction might be afforded to those who wished to make measurements at home, together with information about instruments and the registration of results. An attached library would contain works relating to the respective influences of heredity and nurture. These would include statistical, medical, hygienic, and other memoirs in various languages, that are now either scattered through our different scientific libraries or do not exist in any of them. Duplicates of the measurements, but without the names attached, would form a growing mass of material accessible to statisticians. From conversation with friends, Mr. Galton gathers that the library might fulfil a welcome purpose in becoming a receptacle for biographies and family records, which would be in two classes—the one to be preserved as private documents, accessible only to persons authorized by the depositor; and the other as ordinary books, whether they were in manuscript or in print. Mr. Galton will be grateful for any communications that may show whether sufficient interest really exists to justify a serious attempt to found an Anthropometric Laboratory and Family Record Office, as well as for any helpful suggestions towards the better carrying out of the idea.

COMPARING the proceedings of the Anthropological Sections of the British and American Associations for the Advancement of Science, the American journal *Science* decides that the anthropological work done in the English institution is superior to that of the Americans. "We do not mean to say," it states, "that there are no vague theories held by British men of science, or that no eminent work is done by Americans; but the favourite studies of ethnologists as a whole, and as expressed in the subjects of papers presented to the English Association, seem to be of a more general and of a higher scientific character than they are here."

IN a recent number of the *Korrespondenzblatt* of the German Society for Anthropology and Ethnology, there is a good account of the archæological explorations which have been carried on near Reichenhall, in the south-eastern part of Bavaria. An ancient cemetery was discovered here some time ago, and no fewer than eighty-five skulls have been found, with some well-preserved skeletons, and a great quantity of weapons and ornaments. The skulls are of the primitive Germanic type, and the skeletons show that the people must have been about the size of the existing population of the Bavarian highlands. Among the treasures which have been recovered is a thin gold coin, evidently an imitation of a Roman coin. This coin probably belongs to the fifth century, and it may have found its way to this part of Germany in consequence of the intimate relations which are known to have existed between the ancient inhabitants of Bavaria and the Langobardi.

AN interesting account of a series of experiments upon the so-called alloy between the metals sodium and potassium is given by M. Joannis in the current number of the *Annales de Chimie et Physique*. For some years it has been known that, although in many respects so similar, these two metals possess a certain affinity for each other, and unite under suitable circumstances to form a liquid amalgam-like substance. M. Joannis has at length shown that a definite compound, $NaK_2$, is formed with considerable evolution of heat when the fused metals are brought together in the right proportion. In order to prove this fact, thermo-chemical methods were resorted to, liquid mixtures of the composition $Na_2K$, $NaK$, $NaK_2$, and $NaK_3$ being successively introduced into the calorimeter. The hydrogen liberated by decomposition of the water in the calorimeter was caused to pass first through a perforated platinum plate, and afterwards through a long thin-walled glass spiral, eventually escaping in minute bubbles through the water itself, after becoming reduced to the temperature of the calorimeter. The liquid mixture of metals was gradually introduced by means of an ingenious apparatus consisting of a drawn-out delivery-tube containing the alloy between two layers of protecting naphtha, and which, by means of a valve, could be placed in communication with a reservoir of compressed air, so that, by regulating the valve, a gentle stream of the liquid could be forced out as required. When the calorimetrical experiments were concluded, the amount of alkali was determined in an aliquot part of the water in the calorimeter, and thus the amount of metal used could be arrived at. From the data afforded by these experiments, M. Joannis appears to have conclusively shown that the only stable compound is $NaK_2$, all others being mixtures of this with excess of one or other of the two metals. It is very satisfactory that a reliable method has at last been found of distinguishing between true compounds and physical mixtures of metals, and rather remarkable that one of the earlier analyses of the most stable combination of sodium and potassium gave as the percentage of potassium 76·5, a number which closely approximates to that required for $NaK_2$.

SINCE the Ben Nevis Observatory was opened four years ago, eleven cases of St. Elmo's fire have been recorded. These case have been examined by Mr. Rankin, first assistant, and compared with the other observations made from thirty hours previous to eighteen hours subsequent to the times of occurrence. It would appear that the phenomenon has almost invariably occurred when the temperature, after having been for some time distinctly above the mean of the season, has been falling for about twenty-four hours. During this time, while the temperature fell, the barometer also continued to fall till within three hours of the time of St. Elmo's fire, and thereafter rose steadily. The wind is west-south-westerly till the barometer falls to the minimum, and then shifts to north-west. The accompanying weather is fog, squalls, and unusually large-sized soft hail. Mr. Rankin further compared the phenomena with the weather charts of the Meteorological Office, with the result that pressure was in all cases highest over the south-west and south of Europe, diminishing, however, gradually towards North-Western Europe, where pressure was comparatively low, with several satellite cyclones skirting the northern coasts of the British Islands. Of the eleven cases, two occurred in September, three in October, four in November, one in January, and one in February.

THE Meteorological Report of the Straits Settlements for the year 1886 has been issued. Charts are appended, showing the mean annual elements from 1870 to 1886.

DR. A. MÜTTRICH has published the twelfth Annual Report of the forest meteorological observations of Germany. The stations now number sixteen, and the observations of temperature, &c., are made in the open, in the forests, and in the crowns of the trees. Monthly and yearly *résumés* are given, but there is no discussion of the results. Special attention is paid to evaporation and rainfall.

SEVERAL earthquakes are reported from Carinthia and Styria. On November 14 a shock was felt at Klagenfurt at 10 p.m., which lasted for four seconds. At Bleiburg, as well as over the whole of Carinthia, severe oscillations were noticed. Reports state that shocks occurred at 11 p.m. at Graz and Saldenhofen, and at 4 p.m. at Ostrau-Witkowitz. At Cavaillon and St. Saturnin-lès-Avignon (Vaucluse) oscillations were felt on November 14. At Cavaillon eleven houses were damaged. On November 17, at 8.55 a.m., two severe shocks occurred at Zafferana, near Etna. A severe earthquake, lasting for ten minutes, occurred in Iceland on October 28; at Reikianaes large chasms appeared in the ground.

The second session of the Liverpool Biological Society was opened on October 29, when Dr. J. J. Drysdale, the President, delivered an address on the definition of life as affected by the protoplasmic theory. The Council's Report showed the affairs of the Society to be in a very satisfactory condition, the number of members amounting to 121. At the second meeting of the session, held on November 12, the following papers, dealing with the history of the foundation of the Zoological Station on Puffin Island, Anglesey, were read: account of the foundation of the Station, and of the general work done during the past summer, by Prof. Herdman; report on the land Mollusca, by Alfred Leicester; report on the higher Crustacea, by A. O. Walker; report on the Actiniaria, by J. W. Ellis; report on the Copepoda, by J. C. Thompson; report on the Polyzoa, by J. Lomas.

AT a meeting of the Aristotelian Society on November 21, Dr J. McK. Cattell, of the University of Pennsylvania, read a paper on "The Psychological Laboratory of Leipzig." He explained how experimental psychology undertakes to analyze and measure mental phenomena, and advocated the systematic work of the laboratory, both for the education of students and for the advancement of knowledge. An account was then given of the psychological laboratory at Leipzig, founded by Prof. Wundt in 1879, and of the researches which have been undertaken in it, including experiments on the measurement of sensation, the duration of mental processes, attention, memory, and other subjects. The paper was followed by a discussion in which Prof. Bain, Prof. Dunstan, and others took part.

AN address on the Army Medical School, delivered some months ago by Sir Henry W. Acland, at Netley Hospital, at the distribution of prizes, has now been published. The author explains that he issues the address because of an opinion recently expressed before a Committee of the House of Commons by the Accountant-General of the Army, to the effect that the Army Medical School might be advantageously dispensed with. Sir Henry hopes that the Accountant-General of the Army may revise his opinion, and propose hereafter to increase the grant and to enlarge the scope and means of the school.

THE American Industrial Education Association is about to issue leaflets, giving concise information on points of its work regarding which questions are continually asked. The first leaflet will state compactly what the argument for manual training is.

IN a Report just published by the Foreign Office, on the trade of the Nyassa Territories, Mr. Hawes, the newly-appointed Consul, describes the Strophanthus, a climbing plant from which the natives extract a strong poison, and which is beginning to find its way into the London market. It is called by the natives *kombe*, and is found at a low level, and not apparently on high land. The supplies hitherto obtained have been drawn from the right bank of the Shire River below the Murchison Rapids. There is apparently more than one species, or at least variety, the distinguishing feature being a much smaller pod and fewer seeds. At present, information relative to the varieties is scant. It is a strong climbing plant, and is always found in the vicinity of high trees, on which it supports itself. The stem varies in diameter, but has an average of a few inches. It lies on the ground in folds, the branches supporting themselves on the nearest trees. The young branches are in appearance not unlike the elder. The fruit grows in pairs, and has a peculiar appearance, very like a pair of immense horns hanging to a slender twig. It begins to ripen in July, and lasts till the end of September. The native method of preparing the poison is very simple. They first clean the seeds of their hairy appendages, and then pound them up in a mortar until they have reduced them to a pulp. A little water is then added. This is done by using the bark of a tree containing a gummy substance, which helps to keep the poison on the arrow, in the event of its striking against a bone. The poison thus prepared is spread upon the arrow, and allowed to dry; game wounded by arrows poisoned with Strophanthus die quickly. The flesh is eaten without evil effect. The only precaution taken is to squeeze the juice of the baobab bark on the wound made by the arrow, and this counteracts the evil effects of the poison. Buffalo and all smaller game are killed by this poison.

THE additions to the Zoological Society's Gardens during the past week include a Cheetah (*Cynælurus jubatus*) from East Africa, presented by Mr. Frederick Holmwood; two White-backed Piping Crows (*Gymnorhina leuconota*) from Tasmania, presented by Mr. C. Sadler; a Crowned Hawk Eagle (*Spizætus coronatus*) from South Africa, presented by Mr. E. A. Hart; two Cereopsis Geese (*Cereopsis novæ-hollandiæ*) from Australia, presented by His Grace the Duke of Northumberland, P.C., K.G.; a Common Crossbill (*Loxia curvirostra*) British, presented by Mr. S. R. Armord; a Knot (*Tringa canutus*) British, presented by Mr. Howard Bunn; two Thunder Fish (*Misgurnus fossilis*) from the Baltic Sea; four Chub (*Leuciscus cephalus*) from British fresh waters, presented by Messrs. Paul and Co.; two Cape Crowned Cranes (*Balearica chrysopelargus*) from East Africa, a Mealy Amazon (*Chrysotis farinosa*) from South America, deposited.